

SECTION I

Chart 18523

NM 37/00

| COLUMBIA RIVER CHANNEL DEPTHS MILLER SANDS RANGE TO GULL ISLAND TURN AND CHANNEL TABULATED FROM SURVEYS BY THE CORPS OF ENGINEERS - SURVEYS TO JUN 2000 | | | | | | | | |
|---|----------------------------|---------------------------|----------------------------|-----------------------------|----------------|---------------|----------------------------|------------------------|
| CONTROLLING DEPTHS FROM SEAWARD IN FEET AT COLUMBIA RIVER DATUM (CRD) | | | | | | | | |
| NAME OF CHANNEL | LEFT OUTSIDE QUARTER | LEFT INSIDE QUARTER | RIGHT INSIDE QUARTER | RIGHT OUTSIDE QUARTER | DATE OF SURVEY | WIDTH FEET | LENGTH (STAT. MILES) | DEPTH CRD (FEET) |
| MILLER SANDS RANGE | 36 | 43 | 36 | 34 | 8-00 | 600 | 2.2 | 40 |
| PILLAR ROCK LOWER RANGE | 36 | 40 | 39 | 36 | 8-00 | 600 | 3.0 | 40 |
| PILLAR ROCK UPPER RANGE | 26 | 42 | 40 | 42 | 8-00 | 600 | 1.9 | 40 |
| WELCH ISLAND REACH | 41 | 39 | 36 | 34 | 8-00 | 600 | 3.2 | 40 |
| SKAMOKWA CHANNEL | 37 | 41 | 40 | 36 | 8-00 | 600 | 3.3 | 40 |
| STEAMBOAT REACH | 48 | 47 | 46 | 44 | 8-00 | 600 | 1.4 | 40 |
| PUGET ISLAND RANGE AND TURN | 36 | 40 | 40 | 36 | 8-00 | 600 | 3.5 | 40 |
| WAUMA RANGE | 36 | 41 | 38 | 37 | 8-00 | 600 | 2.2 | 40 |
| DRISCOLL RANGE | 36 | 41 | 41 | 42 | 8-00 | 600 | 1.7 | 40 |
| WESTPORT TURN AND RANGE | 36 | 40 | 40 | 41 | 8-00 | 600 | 2.0 | 40 |
| WESTPORT CHANNEL | 34 | 38 | 39 | 37 | 8-00 | 600 | 2.4 | 40 |
| EUREKA LOWER CHANNEL | 44 | 46 | 46 | 43 | 8-00 | 600 | 2.1 | 40 |
| EUREKA UPPER CHANNEL | 46 | 41 | 44 | 42 | 8-00 | 600 | 0.8 | 40 |
| OAK POINT CHANNEL | 47 | 47 | 44 | 42 | 4-00 | 600 | 2.4 | 40 |
| GULL I TURN AND CHANNEL | 43 | 44 | 41 | 41 | 8-00 | 600 | 2.2 | 40 |

NOTE - CONSULT THE CORPS OF ENGINEERS FOR CHANGES SUBSEQUENT TO THE ABOVE INFORMATION

Chart 18525

NM 37/00

| COLUMBIA RIVER CHANNEL DEPTHS SAINT HELENS TURN TO TOMAHAWK BAR TABULATED FROM SURVEYS BY THE CORPS OF ENGINEERS - SURVEYS TO JUN 2000 | | | | | | | | |
|--|----------------------------|---------------------------|----------------------------|-----------------------------|----------------|---------------|----------------------------|------------------------|
| CONTROLLING DEPTHS FROM SEAWARD IN FEET AT COLUMBIA RIVER DATUM (CRD) | | | | | | | | |
| NAME OF CHANNEL | LEFT OUTSIDE QUARTER | LEFT INSIDE QUARTER | RIGHT INSIDE QUARTER | RIGHT OUTSIDE QUARTER | DATE OF SURVEY | WIDTH FEET | LENGTH (STAT. MILES) | DEPTH CRD (FEET) |
| ST. HELENS TURN | 42 | 43 | 41 | 36 | 8-00 | 600 | 1.7 | 40 |
| WARRIOR ROCK RANGE | 37 | 41 | 40 | 40 | 8-00 | 600 | 1.3 | 40 |
| DUCK CLUB TURN | 37 | 40 | 40 | 42 | 8-00 | 600 | 1.4 | 40 |
| HENRICO RANGE | 38 | 38 | 39 | 40 | 8-00 | 600 | 2.6 | 40 |
| FALES CHANNEL | 42 | 41 | 40 | 38 | 8-00 | 600 | 1.1 | 40 |
| KNAPP POINT CHANNEL | 41 | 42 | 40 | 38 | 8-00 | 600 | 1.8 | 40 |
| WILLOW LOWER RANGE | 38 | 40 | 38 | 37 | 8-00 | 600 | 2.1 | 40 |
| WILLOW UPPER RANGE | 41 | 43 | 40 | 42 | 8-00 | 600 | 1.1 | 40 |
| MORGAN TURN | 42 | 44 | 46 | 48 | 8-00 | 600 | 1.0 | 40 |
| MORGAN CHANNEL | 46 | 45 | 46 | 42 | 8-00 | 600 | 1.5 | 40 |
| VANCOUVER LOWER CHANNEL | 47 | 49 | 54 | 48 | 8-00 | 600 | 1.0 | 40 |
| VANCOUVER RANGE | 40 | 40 | 39 | 38 | 8-00 | 500 | 1.3 | 40 |
| VANCOUVER UPPER CHANNEL | 42 | 41 | 40 | 38 | 8-00 | 500 | 0.9 | 40 |
| VANCOUVER LOWER TURNING BASIN | 32 | 34 | 36 | 40 | 8-00 | 500 | 1.0 | 40 |
| VANCOUVER UPPER TURNING BASIN | 31 | 27 | 28 | 24 | 8-00 | 500 | 0.9 | 36 |
| TOMAHAWK BAR | 11 | 15 | 17 | 15 | 3-00 | 300 | 3.7 | 27 |

NOTE - CONSULT THE CORPS OF ENGINEERS FOR CHANGES SUBSEQUENT TO THE ABOVE INFORMATION

Chart 18526

NM 37/00

| COLUMBIA RIVER CHANNEL DEPTHS MORGAN CHANNEL TO TOMAHAWK BAR TABULATED FROM SURVEYS BY THE CORPS OF ENGINEERS - SURVEYS TO JUN 2000 | | | | | | | | |
|---|----------------------------|---------------------------|----------------------------|-----------------------------|----------------|---------------|----------------------------|------------------------|
| CONTROLLING DEPTHS FROM SEAWARD IN FEET AT COLUMBIA RIVER DATUM (CRD) | | | | | | | | |
| NAME OF CHANNEL | LEFT OUTSIDE QUARTER | LEFT INSIDE QUARTER | RIGHT INSIDE QUARTER | RIGHT OUTSIDE QUARTER | DATE OF SURVEY | WIDTH FEET | LENGTH (STAT. MILES) | DEPTH CRD (FEET) |
| MORGAN CHANNEL | 46 | 45 | 46 | 42 | 8-00 | 600 | 1.5 | 40 |
| VANCOUVER LOWER CHANNEL | 47 | 48 | 54 | 48 | 8-00 | 500 | 1.0 | 40 |
| VANCOUVER RANGE | 46 | 40 | 39 | 38 | 8-00 | 500 | 1.3 | 40 |
| VANCOUVER UPPER CHANNEL | 42 | 41 | 40 | 38 | 8-00 | 500 | 0.9 | 40 |
| VANCOUVER LOWER TURNING BASIN | 32 | 34 | 36 | 40 | 8-00 | 500 | 1.0 | 40 |
| VANCOUVER UPPER TURNING BASIN | 31 | 27 | 28 | 24 | 8-00 | 500 | 0.9 | 36 |
| TOMAHAWK BAR | 11 | 15 | 17 | 15 | 3-00 | 300 | 3.7 | 27 |

NOTE - CONSULT THE CORPS OF ENGINEERS FOR CHANGES SUBSEQUENT TO THE ABOVE INFORMATION

SECTION I

NM 37/00

Chart 18531 (Side A)

NM 37/00

| COLUMBIA RIVER CHANNEL DEPTHS TOMAHAWK BAR TO BONNEVILLE LOCKS | | | | | | | |
|---|----------------------------|------------------------------|-----------------------------|------------------|--------------------|------------------------|-----------------|
| TABULATED FROM SURVEYS BY THE CORPS OF ENGINEERS - SURVEYS TO JUN 2000 | | | | | PROJECT DIMENSIONS | | |
| NAME OF CHANNEL | * SEE FOOTNOTE | | | DATE OF SURVEY | WIDTH (FEET) | LENGTH + (MILES) | DEPTH (FEET) |
| | LEFT OUTSIDE QUARTER | MIDDLE HALF OF CHANNEL | RIGHT OUTSIDE QUARTER | | | | |
| TOMAHAWK BAR | 11 | 15 | 15 | 3-00 | 300 | 1.7 | 27 |
| AIRPORT BAR | 15 | 17 | 17 | 2-00; 1-3-00 | 300 | 2.8 | 27 |
| GOVERNMENT ISLAND LOWER RANGE | 14 | 14 | 16 | 2-00; 1-3-00 | 300 | 1.1 | 27 |
| GOVERNMENT ISLAND MIDDLE RANGE | 14 | 15 | 16 | 2-00; 1-00 | 300 | 1.6 | 27 |
| FISHER QUARRY CHANNEL RANGE | 28 | 25 | 24 | 2-00; 1-00 | 300 | 1.0 | 27 |
| GOVERNMENT ISLAND RANGE | 17 | 19 | 23 | 2-10-00; 1-3-00 | 300 | 1.1 | 27 |
| GOVERNMENT ISLAND UPPER RANGE | 12 | 17 | 17 | 3-00 | 300 | 0.8 | 27 |
| LADY ISLAND RANGE | 17 | 19 | 20 | 3-00 | 300 | 2.1 | 27 |
| LADY ISLAND CHANNEL AND UPPER RANGE | 27 | 27 | 18 | 3-00 | 300 | 0.9 | 27 |
| WASHOUGAL LOWER RANGE | 27 | 25 | 25 | 3-00 | 300 | 1.5 | 27 |
| WASHOUGAL UPPER RANGE | 18 | 18 | 26 | 3-00 | 300 | 1.1 | 27 |
| GARY ISLAND RANGE | 14 | 14 | 13 | 9-00; 2-00; 3-00 | 300 | 0.9 | 27 |
| REED ISLAND RANGE | 15 | 15 | 15 | 2-00 | 300 | 2.2 | 27 |
| TUNNEL POINT CHANNEL | 22 | 22 | 22 | 2-00 | 300 | 0.8 | 27 |
| ROOSTER ROCK CHANNEL | 22 | 21 | 23 | 2-00 | 300 | 1.2 | 27 |
| CAPE HORN CHANNEL | 20 | 25 | 28 | 3-00; 2-00; 2-00 | 300 | 2.4 | 27 |
| CANDIANA CHANNEL | 27 | 26 | 24 | 3-00; 2-00; 2-00 | 300 | 1.0 | 27 |
| FASHION REEF LOWER RANGE | 15 | 18 | 20 | 2-00 | 300 | 2.2 | 27 |
| MULTNOMAH FALLS BAR RANGE | 11 | 23 | 15 | 2-00 | 300 | 1.3 | 27 |
| MULTNOMAH FALLS TURN | 11 | 15 | 20 | 4-00; 2-00; 2-00 | 300 | 0.8 | 27 |
| MULTNOMAH FALLS UPPER RANGE | 17 | 19 | 23 | 4-00; 2-00; 2-00 | 300 | 3.2 | 27 |
| MICROWANS CHANNEL | 28 | 23 | 25 | 4-00; 2-00 | 300 | 1.1 | 27 |
| WARRENDALE LOWER RANGE | 22 | 21 | 21 | 2-00 | 300 | 0.9 | 27 |
| WARRENDALE UPPER RANGE | 28 | 28 | 19 | 2-00 | 300 | 0.8 | 27 |
| HAMILTON ISLAND REACH | 24 | 28 | 17 | 10-00; 2-00 | 300 | 0.9 | 27 |
| ENTRANCE TO BONNEVILLE LOCKS | 22 | 22 | 24 | 3-00 | 300 | 0.6 | 27 |
| * CONTROLLING DEPTHS FROM SEAWARD IN FEET AT COLUMBIA RIVER DATUM AND MAINTAINED TO 15 FEET. PROJECT LENGTHS ARE IN STATUTE MILES. | | | | | | | |
| NOTE - CONSULT THE CORPS OF ENGINEERS FOR CHANGES SUBSEQUENT TO THE ABOVE INFORMATION | | | | | | | |

Chart 18581

NM 37/00

| YACIMA BAY AND RIVER CHANNEL DEPTHS | | | | | | |
|--|--|------------------------------|-----------------------------|----------------|--------------------|--|
| TABULATED FROM SURVEYS BY THE CORPS OF ENGINEERS - SURVEYS TO JUNE 2000 | | | | | PROJECT DIMENSIONS | |
| NAME OF CHANNEL | CONTROLLING DEPTHS FROM SEAWARD IN FEET AT MEAN LOWER LOW WATER (MLLW) | | | DATE OF SURVEY | WIDTH (FEET) | LENGTH (AUT. MILES) DEPTH (FEET) |
| | LEFT OUTSIDE QUARTER | MIDDLE HALF OF CHANNEL | RIGHT OUTSIDE QUARTER | | | |
| CHANNEL ENTRANCE 44°36'22"N, 123°02'34"W | | | | | | |
| TO FIRST TURN | 25 | 30 | 25 | 8-00 | 400-600 | 1.3 40-90 |
| THENCE TO TURNING BASIN | 31 | 29 | 18 | 6-00; 4-00 | 300-400 | 1.3 30 |
| TURNING BASIN | 15 | 24 | 24 | 4-00 | 300-1200 | 0.3 30 |
| THENCE TO YACIMA | 13 | 12 | 12 | 6-00 | 200 | 1.6 18 |
| THENCE TO END OF PROJECT | 02A | 07 | 05B | 7-00 | 150 | 0.7 10 |
| A. SHOAL TO BARE AT 44°36'57.7"N, 123°00'34.2"W. B. SHOAL TO BARE AT 44°37'42.0"N, 123°59'55.5"W. | | | | | | |
| NOTE - CONSULT THE CORPS OF ENGINEERS FOR CHANGES SUBSEQUENT TO THE ABOVE INFORMATION | | | | | | |

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Chart 18652 (Page E)

NM 37/00

| SUSUN BAY AND SAN JOAQUIN RIVER | | | | |
|---|----------------------------|------------------------------|-----------------------------|--------------------|
| TABULATED FROM SURVEYS BY THE CORPS OF ENGINEERS - SURVEYS TO MAY 2000 | | | | |
| CONTROLLING DEPTHS FROM SEWARD IN FEET AT MEAN LOWER LOW WATER (MLLW) | | | | PROJECT DIMENSIONS |
| NAME OF CHANNEL | LEFT OUTSIDE QUARTER | MIDDLE HALF OF CHANNEL | RIGHT OUTSIDE QUARTER | DATE OF SURVEY |
| SUSUN PT. REACH | 43.6 | 44.9 | 46.5 | 5-00 |
| BULLS HEAD CHANNEL | 34.1 | 35.0 | 34.0 | 5-00 |
| EAST BULLS HEAD CHANNEL | 33.4 | 33.2 | 33.9 | 5-00 |
| PT. EDITH CROSSING RANGE | 36.3 | 34.9 | 26.3 | 5-00 |
| PRESTON PT. REACH | 36.0 | 34.6 | 27.9 | 5-00 |
| ROE ISLAND CHANNEL | 33.1 | 34.0 | 33.6 | 5-00 |
| PORT CHICAGO REACH | 36.6 | 36.5 | 37.8 | 5-00 |
| MIDDLE GROUND CHANNEL | | | | |
| WEST REACH | 36.6 | 35.8 | 36.8 | 5-00 |
| EAST REACH | 34.8 | 36.8 | 36.7 | 5-00 |
| NEW YORK SLOUGH | | | | |
| WEST REACH | 31.9 | 33.5 | 36.4 | 5-00 |
| EAST REACH | 34.1 | 34.4 | 34.4 | 5-00 |
| SAN JOAQUIN RIVER | | | | |
| ANTIOCH REACH | 30.1 | 31.3 | 36.1 | 3.12-89 |
| NOTE - CONSULT THE CORPS OF ENGINEERS FOR CHANGES SUBSEQUENT TO THE ABOVE INFORMATION | | | | |

Chart 18656

NM 37/00

| SUSUN BAY | | | | |
|---|----------------------------|------------------------------|-----------------------------|--------------------|
| TABULATED FROM SURVEYS BY THE CORPS OF ENGINEERS - SURVEYS TO MAY 2000 | | | | |
| CONTROLLING DEPTHS FROM SEWARD IN FEET AT MEAN LOWER LOW WATER (MLLW) | | | | PROJECT DIMENSIONS |
| NAME OF CHANNEL | LEFT OUTSIDE QUARTER | MIDDLE HALF OF CHANNEL | RIGHT OUTSIDE QUARTER | DATE OF SURVEY |
| SUSUN PT. REACH | 43.6 | 44.8 | 46.5 | 5-00 |
| BULLS HEAD CHANNEL | 34.1 | 35.8 | 34.0 | 5-00 |
| EAST BULLS HEAD CHANNEL | 33.4 | 33.2 | 33.9 | 5-00 |
| PT. EDITH CROSSING RANGE | 36.3 | 34.8 | 26.3 | 5-00 |
| PRESTON PT. REACH | 36.0 | 34.8 | 27.9 | 5-00 |
| ROE ISLAND CHANNEL | 33.1 | 34.8 | 33.6 | 5-00 |
| PORT CHICAGO REACH | 36.6 | 36.5 | 37.8 | 5-00 |
| MIDDLE GROUND CHANNEL | | | | |
| WEST REACH | 36.6 | 35.8 | 36.8 | 5-00 |
| EAST REACH | 34.8 | 36.8 | 36.7 | 5-00 |
| NEW YORK SLOUGH | | | | |
| WEST REACH | 31.9 | 33.5 | 36.4 | 5-00 |
| EAST REACH | 34.1 | 34.4 | 34.4 | 5-00 |
| NOTE - CONSULT THE CORPS OF ENGINEERS FOR CHANGES SUBSEQUENT TO THE ABOVE INFORMATION | | | | |

Chart 18657

NM 37/00

| SUSUN BAY | | | | |
|---|----------------------------|------------------------------|-----------------------------|--------------------|
| TABULATED FROM SURVEYS BY THE CORPS OF ENGINEERS - SURVEYS TO MAY 2000 | | | | |
| CONTROLLING DEPTHS FROM SEWARD IN FEET AT MEAN LOWER LOW WATER (MLLW) | | | | PROJECT DIMENSIONS |
| NAME OF CHANNEL | LEFT OUTSIDE QUARTER | MIDDLE HALF OF CHANNEL | RIGHT OUTSIDE QUARTER | DATE OF SURVEY |
| SUSUN PT. REACH | 43.6 | 44.8 | 46.5 | 5-00 |
| BULLS HEAD CHANNEL | 34.1 | 35.8 | 34.0 | 5-00 |
| EAST BULLS HEAD CHANNEL | 33.4 | 33.2 | 33.9 | 5-00 |
| PT. EDITH CROSSING RANGE | 36.3 | 34.8 | 26.3 | 5-00 |
| NOTE - CONSULT THE CORPS OF ENGINEERS FOR CHANGES SUBSEQUENT TO THE ABOVE INFORMATION | | | | |

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NM 37/00

Chart 18658

NM 37/00

| SUSUN BAY | | | | | PROJECT DIMENSIONS | | |
|--|----------------------------|------------------------------|-----------------------------|----------------|--------------------|---------------------------|-----------------|
| TABULATED FROM SURVEYS BY THE CORPS OF ENGINEERS - SURVEYS TO MAY 2000 | | | | | | | |
| CONTROLLING DEPTHS FROM SEAWARD IN FEET AT MEAN LOWER LOW WATER (MLLW) | | | | | | | |
| NAME OF CHANNEL | LEFT OUTSIDE QUARTER | MIDDLE HALF OF CHANNEL | RIGHT OUTSIDE QUARTER | DATE OF SURVEY | WIDTH (FEET) | LENGTH (AUT. MILES) | DEPTH (FEET) |
| EAST BULLS HEAD CHANNEL | 33.4 | 33.2 | 33.8 | 5-00 | 350 | 1.1 | 35 |
| PT. EDITH CROSSING RANGE | 36.3 | 34.9 | 26.3 | 5-00 | 350 | 1.1 | 35 |
| PRESTON PT. REACH | 36.0 | 34.6 | 27.8 | 5-00 | 350 | 0.9 | 35 |
| ROE ISLAND CHANNEL | 36.1 | 34.6 | 39.6 | 5-00 | 350 | 1.1 | 35 |
| PORT CHICAGO REACH | 36.6 | 36.5 | 37.8 | 5-00 | 350 | 0.62 | 35 |
| MIDDLE GROUND CHANNEL | | | | | | | |
| WEST REACH | 36.8 | 36.8 | 36.8 | 5-00 | 350 | 1.29 | 35 |
| EAST REACH | 34.8 | 36.6 | 25.7 | 5-00 | 350 | 1.08 | 35 |

NOTE - CONSULT THE CORPS OF ENGINEERS FOR CHANGES SUBSEQUENT TO THE ABOVE INFORMATION

Chart 18659

NM 37/00

| SUSUN BAY | | | | | PROJECT DIMENSIONS | | |
|--|----------------------------|------------------------------|-----------------------------|----------------|--------------------|---------------------------|-----------------|
| TABULATED FROM SURVEYS BY THE CORPS OF ENGINEERS - SURVEYS TO MAY 2000 | | | | | | | |
| CONTROLLING DEPTHS FROM SEAWARD IN FEET AT MEAN LOWER LOW WATER (MLLW) | | | | | | | |
| NAME OF CHANNEL | LEFT OUTSIDE QUARTER | MIDDLE HALF OF CHANNEL | RIGHT OUTSIDE QUARTER | DATE OF SURVEY | WIDTH (FEET) | LENGTH (AUT. MILES) | DEPTH (FEET) |
| NEW YORK SLOUGH | | | | | | | |
| WEST REACH | 31.9 | 33.5 | 35.4 | 5-00 | 400 | 1.3 | 35 |
| EAST REACH | 34.1 | 34.4 | 34.4 | 5-00 | 400 | 1.7 | 35 |

NOTE - CONSULT THE CORPS OF ENGINEERS FOR CHANGES SUBSEQUENT TO THE ABOVE INFORMATION